Investing in Oregon’s Climate-Friendly Agriculture: Healthy Soils Program as a Model

Farmers and ranchers are some of our most important land stewards, and they have an important role to play in any solution to a changing climate – from our coastal dairy operators to eastern wheat farmers, from Hood River’s Fruit Loop orchards to nurseries and diverse vegetable farms throughout the states. These farms and ranches can implement management practices that both reduce greenhouse gas emissions and increase carbon stored in the soil, providing a clear pathway for Oregon’s vision of clean air, clean water, and communities resilient to a changing climate.

About California’s Voluntary Incentives for Climate-Friendly Agriculture

California’s existing cap-and-trade program has allowed the state to invest in climate-friendly agricultural practices on farms and ranches through its California Climate Investments initiative. These investments, through programs like the Healthy Soils Program, provide grants to farmers and ranchers who take action to build soil health and reduce on-farm greenhouse gas emissions. Funded projects can create a cascade of additional benefits: better soil fertility, increased populations of beneficial insects, enhanced water retention in the soil, and improved farm infrastructure and equipment. These investments help build the health and resiliency of farms, farming communities, and ecosystems. The Healthy Soils Program, and other programs funded by California Climate Investments, can serve as a model for Oregonians as we develop our own climate policy that can support a thriving agricultural economy into the future.

Other voluntary incentives programs under California’s Climate Investment Fund include:

- **The State Water Efficiency and Enhancement Program (SWEEP)**. SWEEP provides grants to farmers and ranchers to implement irrigation systems that save water and reduce greenhouse gas emissions.
- **Sustainable Agricultural Lands Conservation Program (SALC)**. SALC funds investments that prevent at-risk agricultural lands from conversion.
- **Alternative Manure Management Program (AMMP)**. AMMP provides grants to dairy and other livestock producers to support practices that reduce methane emissions from manure storage and handling.
- **Funding Agricultural Replacement Measures for Emission Reductions (FARMER) Program**. FARMER creates emissions reductions by providing farmers with funding to purchase cleaner equipment for agricultural operations, such as harvesting equipment, heavy-duty trucks, agricultural pump engines, tractors, and other equipment.

The Healthy Soils Program Fits All Farms

The Healthy Soils Program invests in a diverse set of management practices so that each farm and ranch with its own unique geography, conditions, and management needs can find solutions that will work for their farm.
Over 25 practices are eligible for Healthy Soils Program funding. These practices are good for the climate and create a more resilient agricultural landscape. All practices are based on current Natural Resources Conservation Service (NRCS) Conservation Practice Standards.

Some of the covered soil health practices include:

- **Compost application**: The Healthy Soils Program provides payment for compost application on grasslands, annual crops, perennials, orchards, and vineyards. Compost applications create co-benefits by increasing the nutrient content of soils, improving water efficiency, increasing productivity and reducing the need for fertilizers.

- **Establishing cover crops**: Payments for the establishment of cover crops can cover the cost of plant materials and installation — and funding rates are higher for cover crop plantings that include native plants to build biodiversity. Cover crops improve soil health by providing important nutrients for plant growth. By planting biodiverse cover crops, farmers can promote beneficial insects that keep crops healthy and pest populations down.

- **Planting windbreaks**: The Healthy Soils Program funds the establishment of windbreaks and shelterbelts. Funding is provided on a per-foot basis for farmers who replace a strip of cropland or grassland with a row of woody plants, such as trees and shrubs. Windbreaks offer important benefits by controlling wind erosion, protecting wind-sensitive crops, and increasing pollination. For livestock, windbreaks can reduce animal stress and mortality, as well as visual impacts and odors.

**About the Healthy Soils Program**

California’s [Healthy Soils Program](https://www.cdfa.ca.gov/oefi/healthysoils/) is administered by the California Department of Food and Agriculture. The program has been running since 2017 and is funded using proceeds from California’s cap-and-trade program. [The Healthy Soils Program has funded 332 projects so far](https), and the program has a future, proposed budget of $18M per year over the next five years. This funding will be provided to participating farmers and ranchers across the state.

Investments and incentives created through Oregon climate policy would be tailored to provide value for Oregon producers—but the Healthy Soils Program is a useful model that Oregon can adapt and build upon. More information about the Healthy Soils Program can be found at [www.cdfa.ca.gov/oefi/healthysoils/](https://www.cdfa.ca.gov/oefi/healthysoils/).
• **Residue and tillage management**: Farmers are provided with funding to transition fields from intensive tilling to no tilling or strip tilling, on both irrigated and non-irrigated cropland. By reducing the intensity of soil tillage, farmers can improve soil structure, soil organic matter, and soil moisture conservation. Reduced tillage can also decrease fuel and labor costs.

• **Mulching**: The Healthy Soils Program provides payment for adding high carbon mulch—either natural materials or wood chips—to croplands. Mulching protects the soil from erosion during rainfall and prevents the leaching of fertilizers from the soil. This increases soil health and the efficiency of fertilizer inputs. It can also provide benefits for seed germination, early maturity, and higher production.

• **Nutrient management**: Farmers can receive funding for the development and implementation of a nutrient management budget for various fields, with support from University of California soil scientists. The overall management goal is to reduce application rates of nitrogen fertilizers by 15%. Landowners are paid for this practice at a per-acre rate, and benefit by optimizing the efficiency of their fertilizer applications.

• **Forage and biomass planting**: The Healthy Soils Program funds the conversion of annual cropland to grass, legume forage, or biomass crops for forage and biomass production. This conversion can increase forage supply during periods of low forage production and improve soil and water quality. Forage and biomass planting can also help improve livestock nutrition and health.

• **Prescribed grazing**: Funding supports the development and implementation of a grazing management plan, with the goals of enhancing rangeland health and ecosystem function, as well as optimizing efficiency and economic return.

• **Range planting**: Landowners can receive funding for seeding forages to improve rangeland condition. Payment rates vary depending on the type of plants that are planted—the highest rates are for shrub seeding or transplants, as well as seeding of native species. Range planting can provide or improve forages for livestock. It can also reduce erosion, improve water quality and quantity, and increase carbon sequestration.

• **Silvopasture**: The Healthy Soils Program provides grants for planting of trees and shrubs on grazed grasslands, at a minimum of 20 plants/acre. This integration of trees and grazing can help landowners diversify their income streams by allowing them to manage the same piece of land for both forest products and forage. It also creates wind and weather protection for livestock.

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**The Healthy Soils Application Process**

Recent improvements to the application process have made it even easier for farmers to apply. The Healthy Soils Program now has a four-month rolling application period, and a maximum grant award amount of $100,000 per project.

Applicants fill out an application with information about their proposed project, including size, location, type of farming operation, and agricultural management practices to be implemented. Applicants also create a work plan and project budget, using templates provided by the California Department of Food and Agriculture. Lastly, applicants use a tool to estimate the reductions in greenhouse gas emissions that would result from their project.

The state funds 40 technical assistance providers across the state to provide assistance to interested farmers and ranchers, free-of-charge. These providers help landowners understand program rules, design projects, complete applications, and even assist with implementation.
These are only some of the practices that are funded through the Healthy Soils Program. A full list of eligible practices and rates from previous years can be found through the Healthy Soils Program site here: https://www.cdfa.ca.gov/oefi/healthysoils/docs/2018-PaymentRatesPracticeRequirements.pdf. NRCS also provides detailed information on its conservation practice standards, including descriptions of benefits, criteria, and considerations.

Funding for these practices represents an important investment in the materials, labor, and equipment needed by landowners who want to improve the health and resilience of their soils and farm operations.

Creating Benefits for Climate, the Environment, and the Economy

The practices funded by the Healthy Soils Program create important benefits for farmers and ranchers. California’s range of incentives for climate-beneficial agriculture have been popular with farmers because they provide funding needed to upgrade facilities, improve efficiency, and create multiple environmental benefits. These on-farm improvements can increase economic and environmental well-being, while enhancing soil carbon storage and climate benefits.

Stemple Creek Ranch in California is one of many agricultural producers that have benefitted from the Healthy Soils Program. Loren Poncia, co-owner of the Ranch, says: “The ultimate kicker is we now store more water in the soil. Every year, we have a seasonal drought. But now, the perennials stay green during the summer. We now import less hay and run more cattle on the same amount of land.” Loren’s experience has shown that farmers are a crucial part of the climate solution. “Instead of being a grass farmer, now I’m a soil farmer,” Loren said. “If we really want to stop global warming, farmers are the ones to do it.”

Building Oregon’s Investment Programs

Oregon’s climate policy will be an important source of funding for climate-smart agriculture. As Oregon considers approaches for curbing climate pollution from the state’s largest emitters, policymakers must create solutions that support the efforts of farmers and ranchers. The Healthy Soils Program is one model that we can look to as we build programs to invest in Oregon’s farms and ranches as a key piece of the climate solution. Ultimately, a successful approach must meet the needs of Oregon’s farmers and ranchers as it reduces greenhouse gas emissions, increases the carbon stored in our lands, and protects farms and ranches for the next generation.

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